UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/472,989	12/28/1999	SHUNSUKE INOUE	684.2946	9449

5514 7590 12/15/2003

FITZPATRICK CELLA HARPER & SCINTO
30 ROCKEFELLER PLAZA
NEW YORK, NY 10112

EXAMINER	
ABDULSELAM, ABBAS I	

ART UNIT	PAPER NUMBER
2674	17

DATE MAILED: 12/15/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/472,989	Applicant(s) INOUE ET AL.	
	Examiner Abbas I Abdulselam	Art Unit 2674	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 August 2003*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 and 4-7* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 and 4-7* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 08/22/03 have been fully considered but they are not persuasive.

Applicant argues that the cited references do not teach integrally fixing the display panel and circuit boards by a fixing screw. Applicant also argues that the cited reference do not teach a projection lens support that is positionally aligned and connected with the display panel via the holder by positioning means.

Omae teaches manufacturing of liquid crystal panels in which circuit boards with specific electrode patterns are formed. Omae teaches spacer having a uniform, predetermined size that is sandwiched between the circuit boards, the circuit boards being bonded to hold a gap such that that the liquid crystal is injected into the empty cell. See col. 2, lines 6-28. It would have been obvious to utilize Omae's manufacturing technique to produce the desired size of a panel that fits other components. Matsumoto cites a conventional liquid crystal display panel (20) on which liquid crystal panel driver, LSI is mounted, which in turn mechanically connects a flexible circuit board (22). See col. 1, lines 27-35. It would have been obvious to utilize Matsumoto's admitted prior art of mechanical connection to meet the desired connection by a fixing screw. Matsumoto teaches the use of flexible circuit board connected to display panel to be used in any liquid crystal display apparatus. See col. 1, lines 13-17 and col. 2, lines 4-17. It would have been obvious to utilize Mastsumoto's option of using a wide variety flexible circuit boards to meet the desired configuration of circuit board that fits other components.

2. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, It would have been obvious to one having skill in the art at the time of the invention was made to modify Omae's projection display device to adapt Hardt's configuration of light assembly structure as shown in Fig 2 .One would have been motivated in view of the suggestion in Hardt that the socket structure (100), socket cavities (128, 130) and circuit board (102) are functionally equivalent to the desired projection holder, positioning means and circuit board respectively. The use of socket structure along with the circuit board helps function a display system with light emitting device. Moreover it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Omae's projection display device to include Matsumoto's electrode connections. One would have been motivated in view of the suggestion in Matsumoto that the input electrode, the connector along with the conductive contact area equivalently provide the desired configurations of the electrodes with a connector. The use of input electrode, connector and conductive contact area helps function LCD device as taught by Matsumoto.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1 and 3-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Omae et al. (USPN 5963283) in view of Hardt (USPN 5387901) and Matsumoto et al. (USPN 5694190).

Regarding claims 1 and 7, Omae teaches about a liquid crystal panel and projection display device for enlarging and projecting to a screen (176). Omae teaches images displayed on a small liquid crystal panel (177) are enlarged and projected using project lens (174). In connection to liquid crystal panels, Omae teaches an LCD layer with sides of substrate (11, 12) as shown in Fig 1 and further teaches specific electrode pattern on a circuit board, and electrode substrates in pixel display area. See column 1, lines 9-15, 20-23, column 2, lines 6-15, and column 4, lines 13-21, and Fig 21. However, Omae does not teach about a projection holder fixed on the circuit board for holding the display panel and positioning means for positioning the holder and projection lens support. Hardt on the other hand teaches lens members (48, 48b) inserted in their respective socket cavities (128, 130), the circuit board (102) supported behind the mounting socket structure (100) to position the upper LED device (46a). See col. 7, lines 36-49 , Fig and 10.

Therefore, it would have been obvious to one having skill in the art at the time of the invention was made to modify Omae's projection display device to adapt Hardt's configuration of light assembly structure as shown in Fig 2 .One would have been motivated in view of the suggestion in Hardt that the socket structure (100), socket cavities (128, 130) and circuit board (102) are functionally equivalent to the desired projection holder, positioning means and circuit board respectively. The use of socket structure along with the circuit board helps function a display system with light emitting device.

Omae has been described above. However, Omae does not disclose a scenario where the first electrodes of the display panel and the second electrodes of the circuit board are electrically connected by way of a connector such that first electrodes are brought into contact with a connector. Matsumoto on the other hand teaches a connector (4) having a conductive contact (4a), and having a contact with the signal input electrode portion (1a) when the liquid crystal panel (1) and the circuit board (5) are connected together. See col. 4, lines 38-54 and Fig 1.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Omae's projection display device to include Matsumoto's electrode connections. One would have been motivated in view of the suggestion in Matsumoto that the input electrode, the connector along with the conductive contact area equivalently provide the desired configurations of the electrodes with a connector. The use of input electrode, connector and conductive contact area helps function LCD device as taught by Matsumoto.

Regarding claims 3-4, See Hardt's Fig 10 (128, 130). Hardt also teaches lens portion (48) being outwardly receivable through lens opening (40).

Regarding claim 5, See Matsumoto's Fig 1.

Regarding claim 6, Omae teaches a liquid crystal panel (177) with respect to the formation of optical images. Omae teaches the formation as a change in light scattering is converted to a change in brightness on the screen (176). Column 18, lines 44-55.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Abbas Abdulselam** whose telephone number is **(703) 305-8591.** The examiner can normally be reached on Monday through Friday (9:00-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Richard Hjerpe** can be reached at **(703) 305-4709.**

Any response to this actions should be mailed to:

Commissioner of patents and Trademarks

Washington, D.C. 20231

or faxed to

(703) 872-9314

Hand-delivered responses should be brought to Crystal Park II, Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or preceding should be directed to the Technology center 2600 Customer Service office whose telephone number is (703) 306-0377.

Abbas Abdulselam

Examiner

Art Unit 2674

December 8, 2003

RICHARD HJERPE
SUPERVISORY PATENT EXAMINER
ART UNIT 2600